

Response

A. Introduction

Claims 1-21 were pending in the application prior to entry of the preceding amendments, and claims 1-23 are pending now. The Examiner initially rejected these claims under 35 U.S.C. § 112 as indefinite, contending:

1. “Hybrid” in claims 1-2 should instead be “hydride”;
2. The phrase “the powders” in claim 13 lacks antecedent basis;
3. The sequencing of actions in claims 1-2 is unclear;
4. Each of claims 1-2 appears to describe “the starting material” in two different ways; and
5. Claims 6-7 refer to the starting material in a manner not clearly consistent with claim 1.

The Examiner additionally initially rejected claims 1-21 under 35 U.S.C. § 103(a), asserting that the subject matter of these claims is obvious over combined disclosures of U.S. Patent No. 5,110,374 to Takeshita, et al. and either U.S. Patent No. 5,091,020 to Kim or U.S. Patent No. 6,149,861 to Kaneko, et al, and objected to the specification as referencing claims by their numbers.

B. Objection/Section 112 Rejection

Applicant does not concede the merit of any of the Examiner’s objections and rejections. He nevertheless has revised the specification to delete references to specific claim numbers. Applicant also has (1) changed “hybrid” to “hydride” in claims 1-2, (2) deleted “the powders” from claim 13, (3) clarified sequencing in claims 1-2, (4) introduced “a starting material” in each of claims 1-2,

and (5) revised reference to the starting material in claims 6-7 (as well as in claims 3 and 9). Applicant believes these modifications resolve all concerns expressed by the Examiner and accordingly requests that the objection and Section 112 rejection be withdrawn.

C. Section 103(a) Rejection

The Examiner initially rejected claims 1-21 as obvious over combined disclosures of the Takeshita patent and either the Kim patent or the Kaneko patent. Clearly acknowledged by the Examiner is that the Takeshita patent relates to new materials and thus does not suggest recycling of “scrap rare earth-transition metal-boron alloy as recited in the claims.” See Office Action at p. 6. The Examiner nevertheless contends it would be obvious to do so “for economic and environmental reasons” and because such substitution would produce “reasonably predictable” results. See id.

Applicant disagrees. As evidenced at least in part by the Kim and Kaneko patents, conventional methods of recycling magnetic materials differ significantly from manufacturing magnets from new materials. As well, conditions of the HDDR process required successfully to recycle already-formed rare earth transition metal boron alloys differ from those used to fabricate alloys from new starting materials. Indeed, if fabricating processes designed for new starting materials are attempted with anisotropic and magnetic scrap materials, the fabricated materials will not form acceptable bonded magnets. Accordingly, contrary to the Examiner’s contention, *in no way* would mere substitution of scrap alloys for the new starting materials of the Takeshita patent produce “reasonably predictable” results.

Moreover, *none* of the cited references suggests that methods for producing rare earth transition metal boron alloys from new materials could successfully be used for recycling. Likewise, none of these references discloses that an HDDR process could be used to recycle already-formed anisotropic magnetic or magnetic scrap material. Consequently, skilled workers would have been more likely to improve upon the conventional recycling methods taught by the Kim and Kaneko patents than to change concepts and revise alloy-production methods for new starting powders so that they may be used for recycling. Applicant hence requests that the Examiner's obviousness rejection similarly be withdrawn and that claims 1-23 be allowed.

Petition for Extension of Time

Pursuant to 37 C.F.R. § 1.136(a), Applicant petitions the Commissioner for all extensions of time needed to respond to the Office Action.

Fees

Attached is authorization to charge a credit card for \$1150.00 for the petition fee and presentation of additional dependent claims. Applicant believes no other fee presently is due. However, if Applicant's belief is mistaken, the Commissioner is authorized to debit Deposit Account No. 11-0855 for any additional fee due as a consequence of Applicant's submission of this paper.

Conclusion

Applicant requests that the Examiner allow claims 1-23 and that a patent containing these claims issue in due course.

Respectfully submitted,



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